

SUSTAINABILTY REPORT

FY 2019



MESSAGE FROM THE MANAGING PARTNER

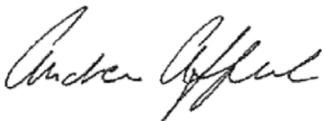
2019 can be characterised as another milestone year for Armstrong.

- Gia Lai Electricity JSC ('GEC') successfully commissioned three additional utility scale solar power plants in early 2019, bringing their total solar power portfolio capacity to 259.4MW. This makes them one of the largest renewable energy players in the Vietnam market.
- Additionally, GEC was successfully listed on the Ho Chi Minh Stock Exchange on 9th September 2019, currently the only pureplay renewable energy firms publicly traded.
- As part of the divestment phase of the Fund's cycle, Armstrong successfully executed a sale and purchase agreement to sell the 40MW Dam Nai Wind power projects in Vietnam to AboitizPower International Pte Ltd. This would be the first foreign-owned wind power M&A transactions for Vietnam.

From our successful track record in South East Asia, we have observed that ESG issues have a significant impact the long-term performance and return on our investments.

In our experience, whilst national regulations only require high level environmental and social impact assessments, these are often not sufficient to fully address all the ESG issues that may arise during the development, construction and asset management process. Our portfolio companies have been required to work with third-party consultants to develop and implement comprehensive ESG pre-investment assessments and practical corrective action plans to ensure that ESG standards are upheld to the requirements of the IFC Performance Standards at all times.

Our consistent emphasis on ESG at all points of our investment cycle has reaped tangible benefits for the Fund. Through the sale of our assets in Thailand, the Philippines and Vietnam, we have observed that potential buyers have placed increasing emphasis on ESG due diligence in their risk assessment and that having strong ESG processes can result in material adjustments to project valuations.



Andrew Affleck,

Managing Partner

Armstrong Asset Management Pte Ltd

EXECUTIVE SUMMARY

Armstrong Asset Management (“Armstrong”) is an independent clean energy asset manager, committed to investing into clean energy infrastructure assets that leave a long-term positive impact on society and the natural environment. Based in Singapore, Armstrong has an investment mandate dedicated to developing countries in Southeast Asia. The first fund which Armstrong manages is the Armstrong South East Asia Clean Energy Fund L.P.

The Fund has a geographic focus on Thailand, Philippines, Indonesia, Vietnam and Malaysia. Sector focus includes solar, hydro, wind, off-grid power generation and waste utilisation.

ESG is an integral part of our risk management system and the mitigation of such risks help to create sustainable value and ensure long term outperformance. Our Fund’s Social and Environmental Management System is based on the IFC Performance Standards of 2012 and we work closely with our investee companies to implement ESG corrective action plans and set the standard for ESG best practices in the sector.

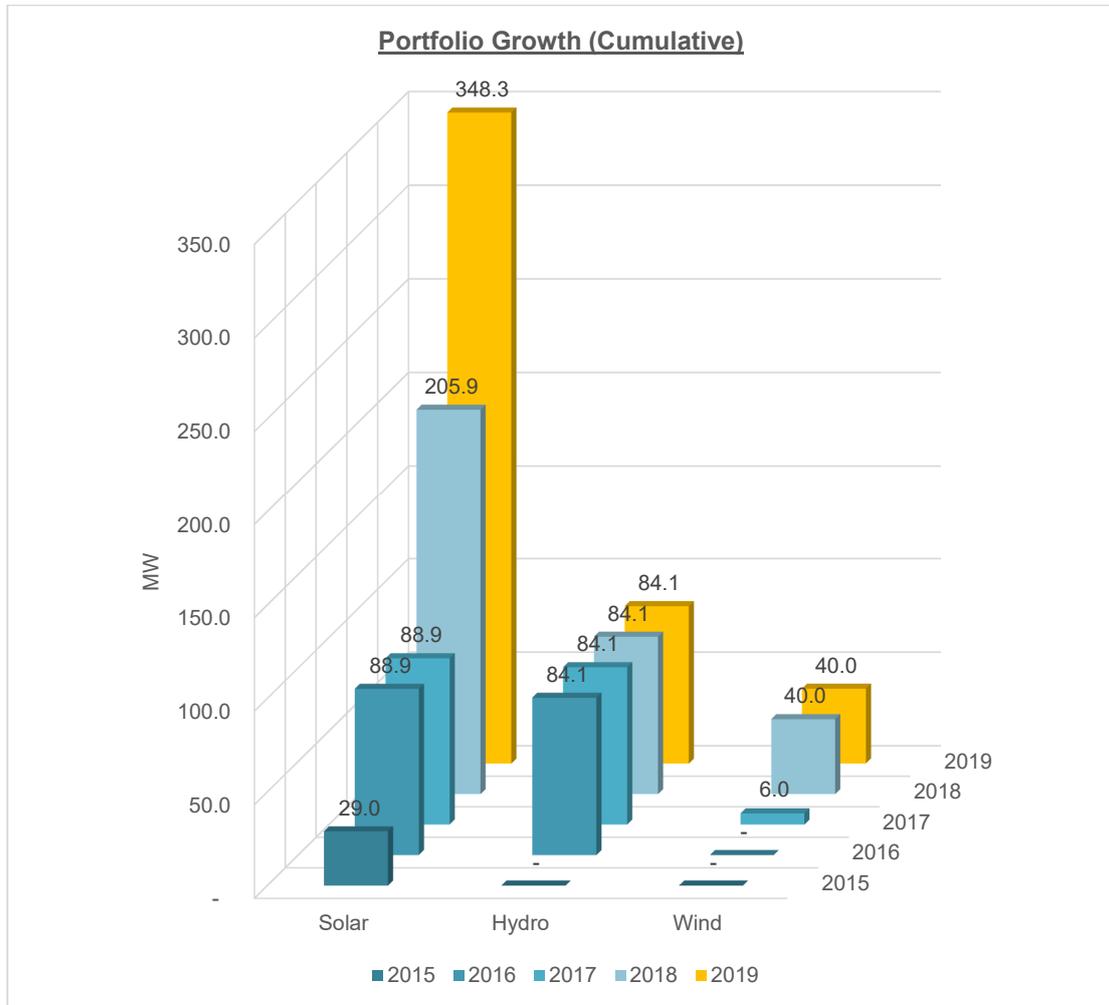
2019 HIGHLIGHTS

- Gia Lai Electricity JSC (‘GEC’) successfully commissioned three additional utility scale solar power plants in early 2019, bring their total solar power portfolio capacity to 259.4MW. This makes them one of the largest renewable energy players in the Vietnam market.
- Additionally, GEC was successfully listed on the Ho Chi Minh Stock Exchange on 9th September 2019, currently the only pureplay renewable energy firms publicly traded.
- We continued to operate our existing portfolio of operating 84MW hydropower projects in Vietnam.
- As part of the divestment phase of the Fund’s cycle, Armstrong successfully executed a sale and purchase agreement to sell the 40MW Dam Nai Wind power projects in Vietnam to AboitizPower International Pte Ltd.
- Our projects remained free of major environmental, safety or social incidents.
- On an annualised basis, our projects supplied enough electricity to the grid to supply over 166,000 households, while avoiding over 327,000 tonnes of CO2 emissions.

2019 PERFORMANCE INDICATORS

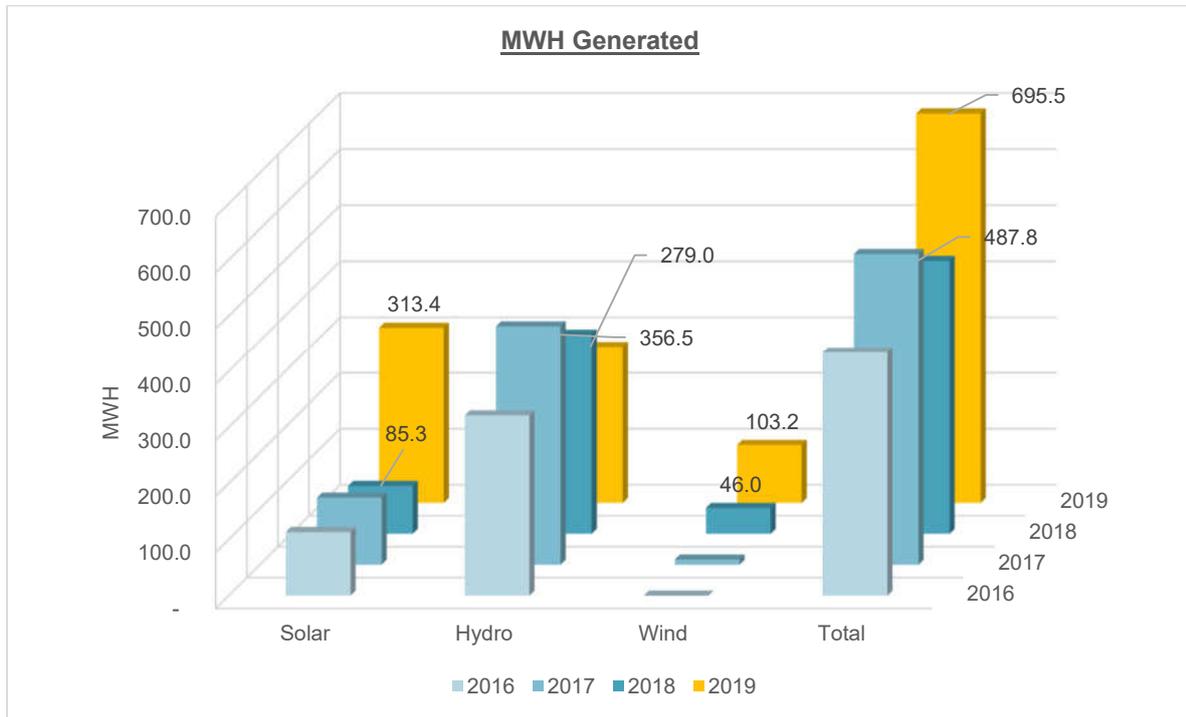
Renewable Energy Installation (MW)

On a full portfolio basis, including assets that have already been divested, the Fund has supported the construction and operations of 472MW of renewable energy. In 2020, the Fund expects to add more wind capacity through its portfolio company GEC.



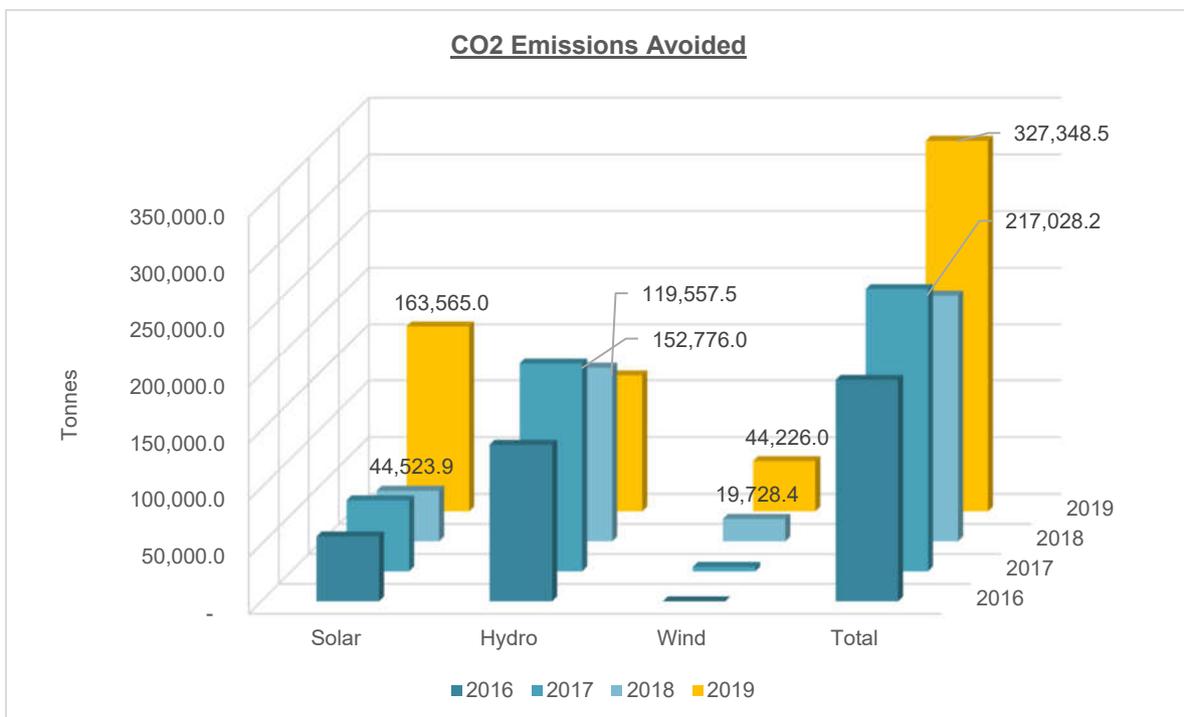
MWhrs Supplied to the Grid

During 2019, Armstrong's projects have supplied approximately 695.5 MWh of electricity.



Carbon emissions abatement

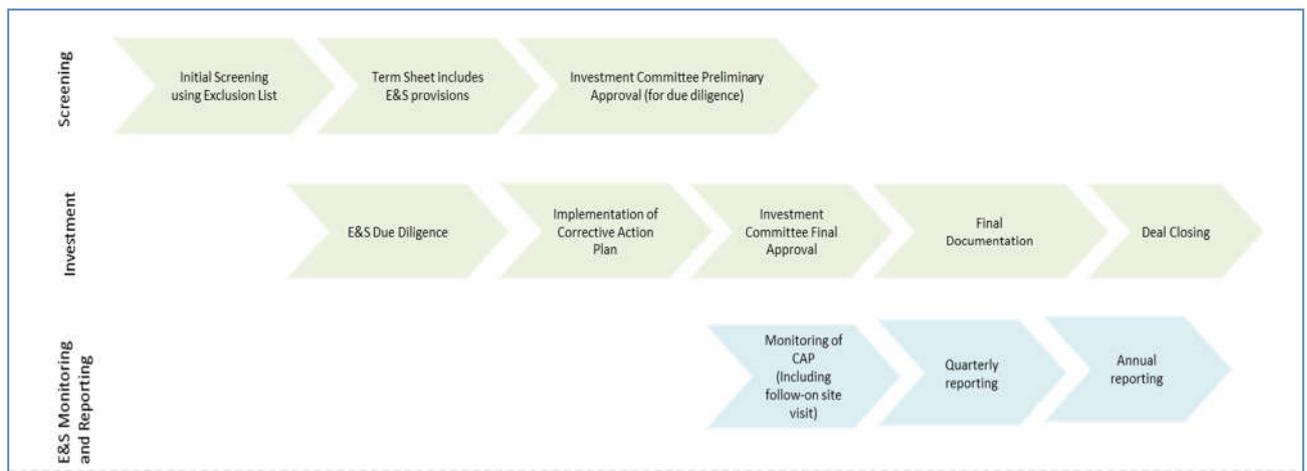
In 2019, Armstrong's projects reduced Greenhouse Gas emissions by an estimated 327,348 tonnes.



OUR ESG APPROACH

Our ESG approach to investments has been strongly guided by the IFC Performance Standards. These guidelines provide our investment teams with a clearly defined policy to follow during the investment process. This approach has been adopted and implemented from the investment screening and due diligence phase, through the construction process and during the operations phase.

By working with our investee companies throughout the investment cycle, we are better able to support and remedy any existing ESG issues and further identify potential future ESG issues. We also provide ESG training to investee companies and ensure that they are supported with adequate resources to adhere to our ESG requirements.



We also use the 2012 IFC Performance Standards (PS) to assess the environmental and social risks and potential impacts of our investments. The IFC PS are as follows:

PS1: Assessment and Management of Environmental and Social Risks and Impacts

PS2: Labour and Working Conditions

PS3: Resource Efficiency and Pollution Prevention

PS4: Community Health, Safety and Security

PS5: Land Acquisition and Involuntary Resettlement

PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

PS7: Indigenous Peoples

PS8: Cultural Heritage

MANAGING ENVIRONMENTAL AND SOCIAL IMPACTS

Social and Environmental Management System

Armstrong manages the environmental and social risks of our business activities in accordance with our Social and Environmental Management System (SEMS). To assess new projects, we undertake ESG pre-screening, due diligence assessment, analysis of gaps and implementation of corrective actions, stakeholder engagement, and Environmental and Social Impact Assessments (ESIAs). The construction and operation of projects is managed through project-specific Environmental and Social Management Plans, Health and Safety Plans, and careful monitoring.

IFC Standards

ESIA's completed for national regulatory purposes in Southeast Asia are typically high-level and are not undertaken with the detail and rigour required by the IFC Performance Standards. For example, assessments required for national requirements often limit the project scope and do not take account of ancillary components, such as the transmission line and access road. In addition, the use of primary data for baseline studies is generally limited and environmental standards and acceptable limits are as per local regulations rather than internationally acceptable standards, which are often stricter.

ESIAs which are completed to international standards determine a more detailed Environmental and Social Management Plan, which clearly outlines practical actions including the schedule and designated responsibilities. This makes it easier for parties such as construction companies and contractors to follow and implement environmental and social measures.

Whilst project developers recognise the benefits of having ESIAs completed to international standards, it is an added layer of cost beyond what they are required to do under national regulations. As a result, there can be some reluctance by development companies to incur these additional costs.

Recognising this gap, in 2015 Armstrong approached the State Secretariat for Economic Affairs of Switzerland ("SECO") and we were awarded a facility of US\$182,500 by SECO to help project developers meet the costs of complying with international environmental and social standards. Total Grant funds paid to date, including bank charges, is \$133,912 (out of a total of \$182,000) and the grant has been deemed utilised.

Health and Safety

As with any renewable power plant, there are occupational hazards and risks to safety. To manage these risks, the Operation and Maintenance Contractors have put in place Health and Safety Plans, including emergency preparedness and response plans and H&S training of all employees.

GIA LAI ELECTRICITY COMPANY

Date of Investment	July 2016	WB Categorisation	B
Geography	Vietnam	IFC PS applicable	1-8
Technology	Hydropower	SEMS Officer	Mr Tran Hoang Thong Anh
Website	http://geccom.vn/en/		

Investment in GEC

In July 2016, the Fund invested US\$21.7 million to acquire a 20.11% of Gia Lai Electricity Company ('GEC'). GEC is a developer and owner of renewable energy power plants in Vietnam. They develop and operate a portfolio of 14 run-of-river small and medium hydropower plants and 4 solar power plants in Vietnam with a combined installed capacity of 300MW and over 350 employees.

Along with IFC, Armstrong aims to complement GEC's local team by bringing financial expertise and capabilities, as well as international project development experience to GEC, particularly technical expertise in solar and wind power. GEC has committed to bring their operation up to the level of international standards and best-practice, including their management of E&S issues.

Highlights of 2019

GEC has established itself as one of the leading solar power plant developer and operators in Vietnam this year. It commissioned an additional three solar power projects before 2019, bringing its total solar power portfolio to 259.4MWh.

- Additionally, GEC was successfully listed on the Ho Chi Minh Stock Exchange on 9th September 2019, currently the only pureplay renewable energy firms publicly traded.



Figure 1: GEC successful listing on the Ho Chi Minh Stock Exchange



Figure 2: Truc Son Solar Power Site

ESG Activities

GEC has continued to build its EHSS capacity with the establishment of an EHSS Department and new recruits to the team. The team comprises of five persons. An external EHSS Advisor was engaged up till June 2019 to further support with the review of EHSS Management System and the EHSS aspects of the new solar projects. The EHSS department continue to play a central role in managing and implementing the firm's EHSS management system.

All of GEC's solar power projects were constructed without serious incident and without significant impacts on local communities. The operational phase ESMP is being implemented for the five plants in 2019.

GEC continues to support the local community through donation programmes for the poor and has recently launched its GEC Green Growth tree planting programme where they recently planted 100 trees in the Chu Prong region where the Company has five small retail hydropower plants in operation.



Figure 3: GEC Management team launching GEC Green Growth tree planting programme

DAM NAI WIND POWER PROJECT

Date of Investment	Jan 2018	WB Categorisation	B
Geography	Mekong Region	IFC PS applicable	1-8
Technology	Wind		

Investment in Dam Nai Wind Power JSC

In January 2018, the Fund invested approximately US\$40 million in equity to fund the development and construction of the Dam Nai Wind Power project. The project was constructed in two phases with 6MW achieving commercial operations in 2017 and the additional 34MW achieving commercial operations in 2018.

Highlights of 2019

The 40MW Dam Nai wind power plant successfully achieved commercial operations with Phase 1 commissioning in October 2017 and Phase 2 achieving commercial operations in December 2018. This is the first operating foreign-owned wind power plant in Vietnam and has been a key milestone wind project by the provincial People's Committee.

As part of the divestment phase of the Fund's cycle, Armstrong successfully executed a sale and purchase agreement to sell the 40MW Dam Nai Wind power projects in Vietnam to AboitizPower International Pte Ltd. This would be the first foreign-owned wind power M&A transactions in the region.



Figure 4: Dam Nai Operating Wind Power Plant

ESG Activities

The project was commissioned in December 2018 and the operational phase ESMP has been implemented.

As part of its operational ESM, the project had commissioned Mott Macdonald to conduct a noise impact assessment once the project was fully operational. The assessment was completed in December 2019. Operational noise monitoring was conducted by Mott Macdonald over the two seasons, at the three locations as identified during the baseline monitoring report in October 2017. Based on the monitoring results, operational noise levels measured, the project is within the noise limits.



Figure 5: Ongoing Noise Measurement

The project continues to supporting the local communities through various initiatives, including sponsoring special events and supporting poor households. In 2019, the project also donated the dismantled met mast to the Ninh Tuan vocational college for research and teaching purposes.

The operating project continues to generate a high level interest from the local community and the company uses the opportunity to interact to further share information on wind power the local community, schools, vocational colleges and government officials.



Figure 6: Educational Site visit from High School children

OUR ESG GOALS FOR 2020

Our goals for 2020 are based on the progression of our portfolio to include projects that would potentially be under construction but the divestment of our remaining operating assets. We expect the portfolio in 2020 to include the continued operation of our wind, solar and hydropower plants in Vietnam through GEC. Our ESG goals for 2020 are thus:

1.	Continue to ensure the maintenance of current the E&S management of our operational assets
2.	Encourage our Investees to make their E&S Policy and Annual Report publically available;
3.	Consider ESG issues in the divestment of our existing operational assets.